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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/804,669	03/19/2004	Darrell Gordy	1391-43100	8006
46133	7590	11/02/2005	EXAMINER	
CONLEY ROSE, P.C.			HUGHES, SCOTT A	
PO BOX 3267			ART UNIT	
HOUSTON, TX 77253-3267			PAPER NUMBER	

3663

DATE MAILED: 11/02/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/804,669

Applicant(s)

GORDY ET AL.

Examiner

Scott A. Hughes

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 12 August 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-53 is/are pending in the application.
- 4a) Of the above claim(s) 13-18 and 37-53 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) 1-12 and 19-36 is/are rejected.
- 7) ☐ Claim(s) 29 is/are objected to.
- 8) ☒ Claim(s) 1-51 are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 4/30/2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)               | Paper No(s)/Mail Date. _____  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>5/21/2004</u> .   | 6) <input type="checkbox"/> Other: _____                                    |

## **DETAILED ACTION**

### ***Response to Amendment***

Applicant's amendments to paragraph [0021] of the specification are sufficient to overcome the objection to the Specification in the office action dated 7/11/2005.

Applicant's amendments to claims 26-36 are sufficient to overcome the objections to the claims in the office action dated 7/11/2005.

### ***Election/Restrictions***

In the reply filed 8/12/2005, the applicant elected Group I and species A, claims 1-12 and 19-36. The applicant further added claims 52 and 53 which the applicant states are linking claims between Groups I and II in the restriction requirement. After examining the added claims, the examiner has found that they are not proper linking claims, and that the restriction between Groups I and II still holds, with linking claims 52 and 53 being added to Group II.

Newly added claims 52 and 53 which contain "means for clauses" do not link inventions 1 and 2 because they do not provide the "remote control" language found in the process and apparatus claims of groups I and II. The linking claims do not provide a means for remote control in remote communication with the buoy.

The applicant further argued that the species requirement be traversed because he states that it is known in the art that "an anchor" means encompasses "one" as well as "more than one." The examiner accepts this statement that "an" means both one and more than one. The claims will be examined with any statement referring to "an"

anchor winch, anchor or anchor line also encompassing more than one. Therefore, the restriction with regard to species is traversed.

### ***Information Disclosure Statement***

The information disclosure statement filed 5/21/2004 fails to comply with the provisions of 37 CFR 1.97, 1.98 and MPEP § 609 because the reference cited, 6175889 is a patent to Olarig the intended Naville reference of the IDS. Since the number does not refer to a Naville patent, the examiner will not consider this IDS. It has been placed in the application file, but the information referred to therein has not been considered as to the merits. Applicant is advised that the date of any re-submission of any item of information contained in this information disclosure statement or the submission of any missing element(s) will be the date of submission for purposes of determining compliance with the requirements based on the time of filing the statement, including all certification requirements for statements under 37 CFR 1.97(e). See MPEP § 609.05(a).

### ***Claim Objections***

Claim 29 is objected to because of the following informalities: Claim 29 reads, "charged by compressor" when it should read "charged by a compressor." Appropriate correction is required.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 4-5, 8-12, 19, 25, 28-29, and 32-36 are rejected under 35

U.S.C. 102(e) as being anticipated by Tulett.

With regard to claim 1, Tulett discloses a seismic source system. Tulett discloses a buoy 108 (Fig. 1) comprising an operating system ([0008]; [0026-0030]; [0039]; [0043]), a seismic wave production device 106 operated by the operating system ([0027-0028]), a placement system Fig. 1 ([0027-0032]), a buoy communications system ([0028]; [0031]), and a dynamic position locating system 224 generating a position signal indicating the location of the buoy ([0008]; [0032]). Tulett discloses a remote control system in remote communication with the buoy through the buoy communications system ([0008]; [0028-0032]). The float 108 disclosed by Tulett is read as being a buoy since he discloses that its purpose is to provide a buoyant force that keeps the seismic source at the surface and to control the position of the devices. The buoy communications channels that are between the buoy, airguns, and processors aboard the rig are read as being remote since they are located in different locations and connect the guns, sensors, controls, and processors together. The GPS broadcast is also a remote control system since it controls the firing of the guns and also transmits signals to the controller processor, and navigation systems.

With regard to claim 4, Tulett discloses that the seismic wave production device comprises an air gun 106 ([0027]).

With regard to claim 5, Tulett discloses that the operating system comprises an air storage vessel charged by a compressor controlled by a controller, the seismic wave production device comprising an air gun powered by the air storage vessel ([0031]).

With regard to claim 8, Tulett discloses that the buoy communications system further comprises a buoy telemetry system in remote communication with the remote control system ([0027-0031]; [0039]; [0043]).

With regard to claim 9, Tulett discloses that the remote control system further comprises a remote control telemetry system in communication with the buoy communications system ([0027-0031]; [0039]; [0043]).

With regard to claim 10, Tulett discloses that the dynamic position locating system comprises a GPS system ([0008]; [0032-0033]).

With regard to claim 11, Tulett discloses that the buoy comprises an operating sensor 110 ([0027]; [0034]).

With regard to claim 12, Tulett discloses that the operating sensor comprises a hydrophone 110 ([0027]; [0034]).

With regard to claim 19, Tulett discloses a seismic acquisition system. Tulett discloses a buoy 108 (Fig. 1) comprising an operating system ([0008]; [0026-0030]; [0039]; [0043]), a seismic wave production device 106 operated by the operating system ([0027-0028]), a placement system (Fig. 1) ([0027-0032]), a buoy communications system ([0028]; [0031]), and a dynamic position locating system 224 generating a position signal indicating the location of the buoy ([0008]; [0032]). Tulett discloses a remote control system suitable for communicating with the buoy through the

communications system ([0008]; [0028-0032]). Tulett discloses a seismic receiver 103 located in a wellbore ([0030]).

The "suitable for" clauses are essentially method limitations or statements or intended or desired use. Thus, these claims as well as other statements of intended use do not serve to patentably distinguish the claimed structure over that of the reference. See In re Pearson, 181 USPQ 641; In re Yanush, 177 USPQ 705; In re Finsterwalder, 168 USPQ 530; In re Casey, 512 USPQ 235; In re Otto, 136 USPQ 458; Ex parte Masham, 2 USPQ 2nd 1647.

See MPEP § 2114 which states:

A claim containing a "recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from the prior art apparatus" if the prior art apparatus teaches all the structural limitations of the claim. Ex parte Masham, 2 USPQ 2nd 1647

Claims directed to apparatus must be distinguished from the prior art in terms of structure rather than functions. In re Danly, 120 USPQ 528, 531.

Apparatus claims cover what a device is not what a device does. Hewlett-Packard Co. v. Bausch & Lomb Inc., 15 USPQ2d 1525, 1528.

As set forth in MPEP § 2115, a recitation in a claim to the material or article worked upon does not serve to limit an apparatus claim.

With regard to claim 25, Tulett discloses that the seismic receiver is in communication with a data signal processor through a receiver telemetry system ([0028-0032]; [0039]; [0043]).

With regard to claim 28, Tulett discloses that the seismic production device comprises an air gun 106 ([0027]).

With regard to claim 29, Tulett discloses that the operating system further comprises an air storage vessel charged by a compressor controlled by a controller, the seismic wave production device comprising an air gun powered by the air storage vessel ([0031]).

With regard to claim 32, Tulett discloses that the buoy communications system further comprises a buoy telemetry system in remote communication with the remote control system ([0027-0031]; [0039]; [0043]).

With regard to claim 33, Tulett discloses that the remote control system further comprises a remote control telemetry system in communication with the buoy communications system ([0027-0031]; [0039]; [0043]).

With regard to claim 34, Tulett discloses that the dynamic position locating system comprises a GPS system ([0008]; [0032-0033]).

With regard to claim 35, Tulett discloses that the buoy comprises an operating sensor 110 ([0027]; [0034]).

With regard to claim 36, Tulett discloses that the operating sensor comprises a hydrophone 110 ([0027]; [0034]).

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.



Claims 2-3 and 26-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tulett as applied to claims 1 and 19 above, and further in view of Haukjem.

With regard to claims 2-3 and 26-27, Tulett does not disclose that the seismic wave production device position is controlled by a winch engaged with an arm extending from the buoy. Haukjem discloses a similar seismic source suspended from a buoyant float for use in seismic surveys (abstract; Fig. 1). Haukjem discloses arms including winches extending from the buoys that support the seismic sources that are suspended in the water (Fig. 3) (Columns 2-3). It would have been obvious to modify Tulett to include arms with winches as taught by Haukjem in order to control the depth of seismic sources in the sea, with the depth of each source controlled independently of the depth of the other source.

Claims 6-7 and 30-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tulett as applied to claims 1 and 19 above, and further in view of Detrick.

With regard to claims 6 and 30, Tulett does not disclose that the placement system comprises an anchor winch attached to an anchor by an anchor line, the anchor winch being controlled by the remote control system. Tulett discloses a buoy that is held from the top instead of anchored to the bottom. Detrick discloses a buoy used in marine seismic research that includes GPS and other communications equipment (Pages 1, 10, 28-31). Detrick discloses that these buoys include anchor lines attached to winches and anchors at the bottom of the ocean (Pages 1, 10, 28-38). It would have

been obvious to modify Tulett to include anchoring the seismic buoys to the bottom as taught by Detrick in order to constrain the source to a desired area of survey.

With regard to claims 7 and 31, Tulett does not disclose that the placement system further comprises more than one anchor winch attached to an anchor by an anchor line, the anchor winches being controlled by the remote control system. Tulett discloses a buoy that is held from the top instead of anchored to the bottom (Pages 1, 10, 28-31). Detrick discloses that these buoys include anchor lines attached to winches and anchors at the bottom of the ocean (Pages 1, 10, 28-38). It would have been obvious to modify Tulett to include anchoring the seismic buoys to the bottom as taught by Detrick in order to constrain the source to a desired area of survey.

Claims 20-21 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tulett as applied to claim 19 above, and further in view of Robbins.

With regard to claim 20, Tulett does not disclose that the seismic receiver is located on a drill string. Robbins discloses that it is known to place receivers on the drill string for seismic borehole sensing (abstract). It would have been obvious to modify Tulett to include receivers on the drill string as taught by Robbins in order to take data for VSP surveys.

With regard to claim 21, Tulett does not disclose that the seismic receiver is located on a wireline tool. Robbins discloses that receivers located on wireline tools are used in boreholes. It would have been obvious to modify Tulett to include a receiver on

a wireline tool in order to take data when there is no drill string in the hole and the hole has already been drilled.

With regard to claim 23, Tulett does not disclose that the seismic receiver is located on a work string. Robbins discloses that it is known to place receivers on the drill string for seismic borehole sensing (abstract). It would have been obvious to modify Tulett to include receivers on the drill string as taught by Robbins in order to take data for VSP surveys.

Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tulett as applied to claim 19 above, and further in view of Bailey.

With regard to claim 22, Tulett does not disclose that the seismic receiver is located on a well casing. Bailey discloses that seismic receivers in boreholes are located on the casing (Column 2, Lines 55-65). It would have been obvious to modify Tulett to include sensors clamped to the casing in order to increase the signal strength from a signal that travels through the formation to the receiver on the casing.

Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tulett as applied to claim 19 above, and further in view of Norris.

With regard to claim 24, Tulett does not disclose that the seismic receiver is located in the annulus between a well casing and the borehole wall. Norris discloses placing receivers in the annulus ([0044]). It would have been obvious to modify Tulett to

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include receivers in the annulus as taught by Norris in order to be able to move the receivers to desired positions.

### ***Conclusion***

The cited prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Scott A. Hughes whose telephone number is 571-272-6983. The examiner can normally be reached on M-F 9:00am to 5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jack Keith can be reached on (571) 272-6878. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



SAH

Mark G. Heller

Primary Examiner